

Of the rejected claims, independent claim 4 remains pending and has been amended to distinguish the invention from the references of record. Accordingly, claims 4, 5 and 8 should be in allowable condition. Further, independent claim 9 has been added along with claims 8 and 10, and each of these claims should be found to be patentable over the art of record.

Interview Summary

Applicants extend their appreciation to the Examiner for granting an office interview that was attended by the Examiner, the undersigned attorney, Applicants' representative Ms. Yukiko Ogiwara, and Primary Examiner Eric Winakur. Claims 4 and 9 as presented herein include the language that was discussed during the interview that Applicants respectfully assert distinguishes the invention from the references of record.

In particular, as discussed in the interview, the invention includes an array having a plurality of light sources and corresponding light detectors, e.g. 401, 402, as shown in Fig. 4. The light emitted from the light sources propagates through an organ, such as the brain, and is detected by the corresponding light detectors. As set forth

in claims 4 and 9, the biological photometric device includes a device for measuring a concentration of metabolites in the organ and changes in the concentration at a location corresponding to a substantially midpoint position between a first light source and a first light detector (or between a second light source and a second light detector, claim 9) as a sampling point. According to the invention, the light sources and light detectors further include another (second) light source or light detector adapted to be disposed on the sampling point, according to claim 4. According to claim 9, the combination includes a third light source at the location corresponding to the substantially midpoint position between the first light source of the first light detector and a third light detector at the location corresponding to a substantially midpoint position between the second light source and a second light detector. As a result of the claimed disposition of light sources and light detectors as set forth in claims 4 and 9, the concentration of metabolites can be measured with a high degree of uniformity.

The interview included a discussion of the references to Hitachi and Simonsen. In particular, Applicants' position that the invention as set forth in independent claims 4 and 9

is not anticipated or rendered obvious by either of these references was explained to the Examiner, as follows.

Hitachi discloses an instrument for optical measurement of a living body which can obtain information of the body without crosstalk by emitting intensity-modulated beams at different frequencies and detecting the beams with photodetectors having the same modulation frequency as that of the corresponding input beams. As shown in Fig. 6 of the publication to Hitachi, light irradiated from an IP 1 is detected by DP1 for measuring the metabolism at position MP1. There is no disclosure in the publication of a second light source or second detector disposed at a sampling point that is at a location corresponding to a substantially midpoint position between the light source and light detector pairs, i.e., between IP1 and DP1. The arrangement of Fig. 23 was also discussed in the interview in order to explain that the figure does not show or suggest the arrangement of light sources and light detectors as set forth in independent claims 4 and 9 of the present application. Accordingly, the Hitachi publication does not disclose or render obvious the invention as now claimed by Applicants in claims 4, 5 and 8-10.

With respect to Simonsen et al., a method of determining glucose concentration in a biological matrix is disclosed.